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ABSTRACT

This study examined reasons that some full-time students take longer than normal to complete a bachelor's degree, and whether students who extend their program are more like those who take only 4 years to graduate or are more like dropouts. One part of the study reviewed 64 transcripts of all traditionally-admissible new freshmen who entered the college in fall 1988 and graduated in five years. Another study component reviewed transcripts of students responding to a 1991 survey, representing three groups: those graduating in four years (n=41), those graduating in more than four years (n=27), and those not graduating (n=25). Regression analysis was also conducted on 227 juniors and seniors who responded to a 1994 outcomes survey. Extender behavior was consistently associated with only two factors: protecting a high grade point average and financial need. Extenders were not negatively affected by taking longer to graduate and were generally satisfied with their experiences. Students who took longer to graduate or who tended to register for fewer than 15 credits were not significantly different from students who graduated in four years on most variables measuring academic, social, and administrative aspects of college. (Contains 37 references.) (SW)

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CHARACTERISTICS OF EXTENDERS:

FULL-TIME STUDENTS WHO TAKE LIGHT CREDIT LOADS AND GRADUATE IN MORE THAN FOUR YEARS

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This paper was presented at the Thirty-Fifth Annual Forum of the Association for Institutional Research held at the Boston Sheraton Hotel & Towers, Boston, Massacusetts, May 28-31, 1995. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Editor
AIR Forum Publications

CHARACTERISTICS OF EXTENDERS:
FULL-TIME STUDENTS WHO TAKE LIGHT CREDIT LOADS AND GRADUATE IN MORE THAN FOUR YEARS

Abstract

Do students who take longer than normal to complete a bachelors degree display in the aggregate some of the same characteristics as those who graduate in four years, or are they more like those who drop out? How important are various academic, social, and financial factors in students' plans to take longer? Do existing student-institution fit and persistence models also provide helpful concepts for understanding degree extension? This study addresses these questions by analyzing the course-taking patterns and survey responses of a sample of undergraduates at a public research university.

Extender behavior in this study is consistently associated with only two factors: protecting a high GPA and financial need. While our findings are partially congruent with Cabrera's integrated model of student retention, there are few other congruencies between these findings and the student-institution fit literature. We found little influence exerted by the usual measures contained in other studies that have used concepts in the Tinto, Bean, and Cabrera models, such as academic and social integration, institutional and goal commitment, and encouragement by family and friends. Apparently these concepts and measures have little to do with student decisions to take a lighter academic load and to lengthen their graduation date. Extenders are not negatively impacted by taking longer to graduate and are generally satisfied with their experiences.

CHARACTERISTICS OF EXTENDERS

FULL-TIME STUDENTS WHO TAKE LIGHT CREDIT LOADS AND GRADUATE IN MORE THAN FOUR YEARS

Background and Purpose

The purpose of this research is to address two types of undergraduate student behaviors: taking longer than normal to graduate, and registering for less than a full load of 15 credits. Three related public policy concerns interact to form the basis for this study. The first is a concern about the cost of higher education, both by the parents of college students and by the tax-paying public. Virtually every sector of the economy except education has witnessed substantial gains in productivity over the years. The second policy concern is an almost universal need for the efficiencies of "good enrollment management" by campuses. Considerable resources are devoted to the processes of recruiting, retaining, and graduating diverse populations of students in a competitive environment. The third concern focuses attention on effective academic advisement and access to courses that enable students to graduate on time. TQM and other customer-oriented management practices direct our campuses to become more flexible and responsive to student needs.

There appears to be a rising tendency for many full-time undergraduate students to take more than four years to graduate. National Center for Education Statistics data show that less than one-third of the college class of 1990 had graduated within four years. Large numbers of students who enter college as full-time freshmen are taking five and six years to complete a bachelor's degree, so many that most national databases and college guidebooks no longer report four-year graduation rates, opting instead for five and six

year rates. The Federal Student Right to Know Act requires two-year campuses to report a three-year graduation rate and four-year campuses to report a six-year rate. Does the longer time to graduation reflect a flexible system or a flawed one?

Certainly colleges and universities in the last 25 years have become more open and flexible institutions. Recognizing the diversity of today's students and the complexity of modern life, many campuses make it easier than ever before for students to study abroad, to obtain work experience, to transfer to another campus, and to "stop out," for a variety of personal reasons.

At the same time, state budget pressures in recent years have forced many campuses to reduce the numbers of both teaching faculty and support staff. One hears on the campus and reads in the *Chronicle of Higher Education* student complaints about access to needed courses, and about poor advisement. Ironically, these conditions come just as there is renewed interest in making it possible for students to speed up their studies and graduate in less than four years (Burke 1993, Johnstone 1993). Parents, legislators, and educators alike are concerned that students make satisfactory progress toward degree completion.

Those students we have chosen to call 'extenders' have attracted much attention over the last several years. Several states, California, Florida, Oregon and Texas among them, have taken or have proposed to take action against students characterized as staying in college too long and accumulating excessive credits. Policies aimed at charging students a higher tuition when they take more courses than needed to graduate have been introduced. Florida has set State caps on the number of credits that can be required of students in particular program areas. The University of Texas is concerned that its seniors are taking class seats away from new freshmen. While some lawmakers see this as a potential money-maker on the assumption that these malingers are from families that can afford to pay for this luxury, lawmakers in Oregon expect that an excess credit surcharge will change students behavior and make room for an expected increase in high school

graduates who will need to be accommodated. In the California State University system, students enrolled for 6 or fewer credits are charged one fee and are not charged by the credit.

Particularly striking is the apparent absence of any research evidence about why students are lingering. Indeed, each state expects a different behavioral impact from a tuition surcharge on targeted students, further suggesting that Legislators have no research on which to base their policy assumptions. The Oregon State Board of Education initially proposed that undergraduate students who took more than 24 credits beyond what was necessary to complete their major be charged non-resident rates which are roughly three times the resident rate. Subsequently, research prepared by the Board found that the assumptions underlying this proposed policy were grossly exaggerated and the proposed policy was dropped.

There is little empirical investigation on this topic in the literature. One earlier study (Volkwein 1993) suggests that most extenders take lighter than average credit loads and fall into two types: vocational and collegiate. **Vocational extenders** are those who have higher levels of financial need and loan indebtedness, more frequently report that they are "required" to work in order to meet expenses, and have lower grade point averages. **Collegiate extenders** are those who indicate that they often take a light credit load because they desire more free time, or that they dropped one or more courses after the semester began because it was too difficult and/or because they were dissatisfied with their grade.

Theoretical Framework

One of the most productive streams of theory development and research in the past 20 years has been on the impact of college on students (Pascarella and Terenzini, 1991). A variety of student-institution fit models have been developed. However, research on retention and persistence has received the most attention, and scholarship in

this area has been dominated by two models that have recently been combined to form a third more comprehensive model.

Tinto's student integration model (1975, 1987) has been the most widely researched. Studies at a variety of institutions using diverse populations of subjects have developed measures for the concepts in the student attrition model and found support for the underlying theories (Pascarella & Terenzini, 1980, 1983; Pascarella & Chapman 1983; Pascarella et.al., 1983; Terenzini et.al., 1985; Terenzini & Wright, 1987; Volkwein et.al., 1986). Another model advanced by Bean and his associates, the model of college student attrition, has also found support (Bean 1980; Bean and Vesper, 1990; Bean & Metzner, 1985; Metzner & Bean, 1987; Cabrera et.al., 1990).

More recently, Cabrera and his associates (1992, 1993) have combined the best elements of these other models and developed refinements that explain as much as half the variance in persistence between the freshman and sophomore years. Cabrera's integrated model of student retention, while relying heavily upon Tinto's concepts of academic and social integration, institutional and goal commitment, also gives prominence to concepts from Bean's student attrition model, from the ability to pay model (Cabrera et.al., 1990), and from Nora's models that address the role of friends and parents (Nora 1987; Nora et.al., 1990). Cabrera's new model is especially valuable for increasing our understanding of the role of family, friends, and financial aid in retention and persistence.

Several authors have demonstrated that the concepts and measures in Tinto's student integration model can be applied to other college outcomes, as well as persistence. Pascarella & Terenzini (1982), Terenzini, et.al. (1984a,1984b,1987), Volkwein, et.al. (1986,1991,1994) are among the researchers finding a variety of cognitive and non-cognitive outcomes influenced by measures of student academic and social integration. This raises the possibility that Cabrera's integrated model may also explain more than

persistence behavior. To what extent can Cabrera's integrated model of student-institution fit be utilized to explain other outcomes of the college experience?

The current study, then, represents an attempt to apply concepts in existing student retention and persistence models to other outcomes as well. What are the reasons that some students take longer than normal to complete a bachelors degree? Are students who extend their programs more like those who take only four years to graduate or are they more like those who drop out? How important are various academic, social, and financial factors in students' plans to take longer?

Methodology

This research examines why full-time students take longer than the normal four years to graduate. The study was conducted at a research university offering programs at the bachelors, masters and doctoral levels in Arts & Sciences, Business, Education, and Public Affairs. The matriculated undergraduate population numbers just over 10,000 students, with graduate enrollment of about 5,000. The research was conducted in two phases. The initial descriptive phase of the study draws upon a transcript analysis of freshmen who entered in Fall 1988 who graduated five years later and upon a similar transcript analysis of selected respondents to a special Student Opinion Survey administered in Spring 1991 to 428 undergraduates. The second analytical phase of the study uses regression analysis to examine the Spring 1994 responses to the same survey by 227 juniors and seniors. This survey is part of the University's on-going assessment program and is administered every three years. It contains over 180 items of information in five categories:

1. Background information about age, class year, gender, ethnicity, employment, admissions status, type of enrollment, major, financial aid, and residence.
2. Student plans, goals, and reasons for attendance.
3. Satisfaction with an array of campus services and facilities.

4. Levels of satisfaction with various aspects of the institution's academic, administrative, and social environment or climate.

5. A variety of cognitive and non-cognitive experiences and outcomes, including classroom experiences, faculty contact, course taking patterns, graduation plans, anticipated loan indebtedness, GPA, and self-reported growth.

Phase I Sample, Variables, and Procedure

Phase I, the descriptive aspect of this research, has two parts. First, there is a review of the 64 transcripts of all traditionally-admissible new freshmen who entered in Fall 1988 and graduated in five years, rather than four. The transcripts contain a variety of information about course enrollments each semester, grades and academic standing, and credits earned elsewhere.

The second part of Phase I involves a similar review of transcripts of students responding to our 1991 180-item survey described above. Respondents were divided into three groups, those graduating in four years, those graduating in more than four years, and those not graduating. The number of respondents who fit into the last two groups is small (27 and 25, respectively), while the number of respondents who graduated in four years was 119. While all transcripts from the two former groups were studied, only 41 transcripts from the latter group were reviewed. These data were compared to the student's responses to questions on the Spring 1991 survey about their plans to graduate, work experience, and reasons for taking fewer than 15 credits.

Phase II Sample, Variables, and Procedure

The regression analysis for this study is conducted on 227 junior and seniors who responded to the 1994 outcomes survey and who completed at least 90% of the questions. They are representative with respect to age, gender, and race. While not all majors are present in the sample, the 15 largest are represented.

Dependent Variables

This research focuses on two types of undergraduate behaviors: taking longer than normal to graduate and registering for less than a full load of 15 credits. These are the dependent variables in the regression analyses. As shown in Table R-1, the number of semesters with fewer than 15 credits and taking longer than normal to graduate are self-reported items on the survey. To establish a comparison between these dependent variables and other outcomes measures in the survey, we also report the regression results on two other dependent variables: self-reported growth and overall satisfaction with the university. The growth and satisfaction scales have been used for over a decade at this university, are derived from the work of Volkwein (1991), and have Alpha reliabilities of .86 and .77, respectively.

Those who judged themselves to be graduating "later" were dummy coded "1", while "early" and "on time" received "0". Such student self-reporting has generally been quite accurate in the past and allows students in the 5th year of a 4-year program to be treated the same as students in the 6th year of a 5-year program. Since the "later than normal" dependent variable is dichotomous, we examine the influences on this behavior by a series of logistic regression models. Logistic regression has been shown to be the most appropriate analytical tool for handling a dataset with a dichotomous dependent variable and a mixture of categorical and interval data among the independent variables (Feinberg, 1983; Cabrera, 1994). We tested alternative regression models for goodness of fit, and variables in the conceptual model are dropped from the analysis when they do not improve the fit.

The other dependent measures (growth, satisfaction, and # semesters with fewer than 15 credits) are analyzed using OLS regression.

TABLE R-1
Measures Used in the Regression Analyses

Constructs & Variables from Student-Institution Fit Literature	Nature of Measure	Cronbach's Alpha	Examples of key items in each scale
INDEPENDENT MEASURES			
Academic Integration			
Classroom Experiences	7 item scale	.86	How frequently have you been intellectually stimulated by the material covered in class?
Faculty Contact	1 item		# times met with faculty outside class this year.
Faculty advisement	2 item scale	.86	Availability of your advisor.
Faculty Concern	2 item scale	.74	Faculty Respect for Students.
Student Effort	2 item scale	.76	In general, I exercise good study habits.
Academic Performance	1 item		Cum GPA
Social Integration			
Peer Relations	2 item scale	.87	I have developed strong friendships with other stu.
Social Involvement	4 item scale	.70	Opportunities for involvement in campus activitie
Encouragement			
Family	1 item		Family is solid source of personal support.
Friends	1 item		Friends are solid source of personal support.
Finances			
Financial need	1 item		Has been difficult to finance my college education
Grants	3 item scale	.81	Grants & scholarships = major source of aid.
Employment	1 item		Hours per week
Savings/work	2 item scale	.67	My own savings & work = major source of funds.
Institutional & Goal Commitment			
Goal Clarity	3 item scale	.72	My purpose in going to college is clear.
Highest Degree Expected	1 item		Bachelors, Masters, Doctorate
Overall Satisfaction	3 item scale	.77	If I had it to do all over again, I would still attend this college.

(Cont'd)

TABLE R-1 (Cont'd)
Measures used in the Regression Analyses

Variables Suspected/Purported to Influence Extender Behavior	Nature of Measure	Cronbach's Alpha	Examples of key items in each scale
Quality of Campus Life			
Course Availability	3 item scale	.85	Availability of courses needed for graduation.
Multi-cultural environment	6 item scale	.84	Satisfaction with gender/racial diversity of faculty/staff/students.
Perceptions of Prejudice	2 item scale	.89	Acts of racial prejudice by faculty towards student seldom occur.
Harmony/tolerance	5 item scale	.67	Satisf. with Racial Harmony at this college.
Campus responsiveness	6 item scale	.71	Satisf. with campus response to crime.
Facilities	6 item scale	.76	Satisf. with condition of buildings / Res. Halls
Clear rules & regs.	2 item scale	.74	Sat. w. clarity of rules governing student conduct.
Student Voice in decisions	4 item scale	.69	Sat. w. student voice in college policies.
Registration < 15 credits			
Reasons given on survey:			
Protect GPA/Free Time	4 item scale	.61	Took less credit to maximize success/protect GPA.
Work / Family Responsibilities	6 item scale	.69	I am required to work to pay expenses. I need time for family activities/responsibilities.
Course Access a Problem	6 item scale	.73	Could not get course at time I wanted.
Dropped course/in diffic'lty	6 item scale	.67	Dropped a course that was too difficult for me.
DEPENDENT MEASURES			
Self Reported Growth	6 item scale	.86	Campus contribution to your intellectual growth (acquiring information, ideas, concepts, and analytical thinking)
Longer graduation time than normal	1 item		Self- reported on scale of "Early," "On-time," "Later" than normal.
Lower Registration Load	1 item		Number semesters < 15 credits

Independent Variables

The constructs and variables used in the analysis are shown in Table R-1 and are drawn directly from the student-institution fit literature. In particular, the measures listed in the table for academic integration, social integration, encouragement, finances, and institutional and goal commitment are borrowed from studies by Pascarella & Terenzini, 1982; Terenzini et al., 1982, 1984; Cabrera et.al. 1992, 1993; Nora 1987; Nora et al. 1990; Volkwein et al., 1986; Volkwein 1991; and Volkwein & Carbone 1994. The alpha reliabilities for the various multi-item scales are recalculated for this population and, as shown on the first page of Table R-1, all but one are above .70.

In addition, we drew upon a number of other items and scales contained in the 1991 and 1994 surveys that might be related to the dependent measures associated with longer than normal graduation and lighter than 15 credit course load. In particular, we examined various measures of campus life and campus climate (course availability, perceptions of prejudice, racial harmony, campus responsiveness, rules and regulations, facilities, and student voice in decisions), as well as various reasons the students gave for taking fewer than 15 credits. An array of survey items related to these aspects of student life were treated to a principle components analysis and reduced to scales with Alpha reliabilities ranging from .61 to .89, as shown on the second page of Table R-1.

Findings - Phase I

As Table 1 shows, the percentage of students taking longer than four years to graduate, while small, has grown as a percentage of the entering cohort over the last several years from less than 10 percent for the Fall 1984 cohort of new freshmen to nearly 14 percent for the Fall 1988 cohort. (As an aside, it should be noted that there are only a handful of students who are still enrolled at the University after six years. For the last two cohorts, there have been only 15 students who were still enrolled after six years.)

Table 1

		Graduated in			
		Four Years		Five Years	
Cohort	N	N	Percent	N	Percent
Fall 1984	2128	1094	51.4%	207	9.7%
Fall 1985	2177	1194	54.8%	238	10.9%
Fall 1986	2403	1205	50.1%	276	11.5%
Fall 1987	2147	1086	50.6%	227	10.6%
Fall 1988	2152	1077	50.0%	292	13.6%

A transcript analysis of 64 new Fall 1988 traditionally-admitted freshmen who took five years to graduate revealed the following:

1) These students are full-time students in the sense that they are generally registered for 12 credits, which is full-time for enrollment-reporting and for tuition (there are no charges for additional credits). These are not part-time students who, for example, register for only one or two courses a semester and may even skip a semester.

2) Excessive credits was a significant factor for one student in five. Of the 64 students studied, thirteen (20 percent) had accumulated 140 or more credits. Nine of the thirteen students were in the sciences, mathematics, or computer science. The additional credits for seven of thirteen students were earned as pre- or post-matriculation credits at other institutions (three of these students were in dual-degree engineering programs).

3) Two students were not truly extenders in that they withdrew for two semesters. A total of fourteen students took longer to graduate because they withdrew for one year (6) or for one semester (10). Four of these students had been placed on academic

probation and chose to leave the University for a time, while the remaining students left for a time indicating that the reason was financial (3), medical (1), personal (1), death in family (1), and transfer (1). Moreover, a number of students took only one additional semester at the University and often their registration during this last semester was for less than 15 credits.

4) Academic performance was a problem for nearly one out of every 5 students. However, at the time of graduation, 65 percent (42) of the 64 students had a cumulative grade-point-average of 3.00 or higher.

5) The most apparent reason for students to take longer than four years to graduate was that they consistently attempted fewer than 15 credits a semester. With a 120 credit bachelor's degree requirement, students need to register for a minimum of 15 credits each semester to graduate. All except 8 of these students had at least one semester in which they attempted fewer than 15 credits. (Table 2) Moreover, it is clear that for many students, pre- and post-matriculation credits earned elsewhere are an important factor in completing their program requirements for graduation.

Table 2

Fall 1988 Cohort of New Freshmen Who Graduated in Five Years

Number of Semesters <15 Credits	Number of Students	Percent	Cumulative Percent
None	8	12.5%	12.5%
1	5	7.8%	20.3%
2	8	12.5%	32.8%
3	13	20.3%	53.1%
4	6	9.4%	62.5%
5	11	17.2%	79.7%
6	7	10.9%	90.6%
7+	6	9.4%	100.0%
	64		

6) Excluding the three students in dual-degree programs, 36 percent of the 61 students entered with in pre-matriculation credit, while 22 percent earned summer session credit elsewhere. Summer courses at the University were taken by nearly 50 percent of the students for an average of 8 credits each. (Table 3) Table 4 shows that some students choose to use only one of several ways to earn additional credit.

7) In semesters in which they attempted at least 15 credits, significant numbers of these students withdrew during the semester from courses and/or did not receive passing grades and thereby did not earn 15 credits for the semester.

8) Nearly every student did successfully complete one or more semesters with more than 15 credits. This, however, did not compensate for not attempting or successfully completing more credits in other semesters.

Table 3

Fall 1988 Cohort Who Graduated in Five Years

Pre-Matriculation Credits	
Percent of Students	**35.9%**
Average Credits	**8.9**
Home-Campus Summer Session	
Percent of Students	**47.0%**
Average Credits	**8.0**
Summer Session Elsewhere	
Percent of Students	**21.8%**
Average Credits	**5.8**
Regular Semesters Elsewhere	
Percent of Students	**15.6%**
Average Credits	**12.1**

Table 4

Course-taking Strategies of Fall 1988 Freshmen Cohort

Number of Students With Credits Only From:	
Advance Placement or Equivalent	**9**
Summer Session Elsewhere	**5**
Home-Campus Summer Session	**12**
Number of Students With Only Regular Home-Campus Semester Credits	**13**

This transcript analysis of the Fall 1988 cohort of new freshmen who took five years to graduate provided some insight into the course-taking behavior of these students. What it could not provide was information on the reasons and motives for students' course-taking behavior. Why did student's consistently attempt fewer than 15 credits a semester. Among the possible reasons were course availability, changing major, personal problems, finances, work, attempts to improve grade-point average, and desire to have an easy semester. Only in the few circumstances where a student withdrew from University for a semester or two was there an opportunity to understand something about the student. Indeed, looking only at transcripts it is not clear whether they planned to take longer or whether they were satisfied with the situation.

The survey administered on the campus in Spring 1991 presented an opportunity to compare course-taking behavior with students responses to survey items that dealt directly with their plans to graduate, work experience, and reasons for taking fewer than 15 credits.

Chart 1 shows some interesting differences in the graduation plans of those students who eventually graduated compared to those who have not graduated. Ninety-five percent of the survey respondents who eventually graduated in four years, expected as of Spring 1991 to graduate in four years. Seventy-two percent of the respondents who have not graduated indicated in Spring 1991 that they would need only four years to graduate. Among those respondents who took longer than four years to graduate, 56 percent indicated that they would only need four years. This can either be interpreted to mean that these latter two groups of students had a lower set of expectations, or, given that they have not graduated or took longer than four years to graduate, that they had too high an expectation. The majority of those students expecting to take longer than four years to graduate were satisfied with this situation.

Chart 1

Graduation Plans

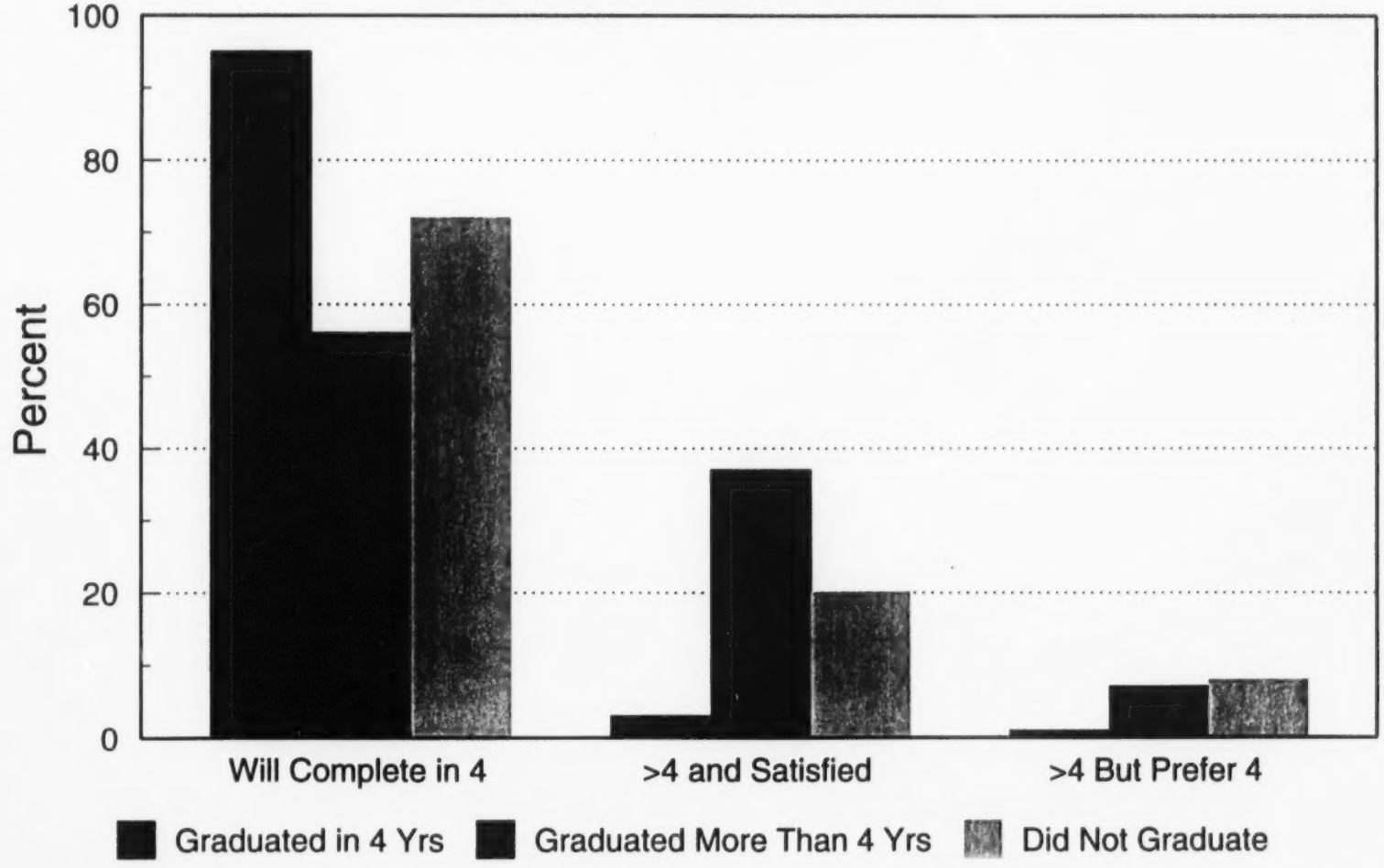

Chart 2 shows that the work experience of these students while attending the University varied little between students who graduated in four years and those that took longer. The high percentage of students who did not graduate who indicated that they did not work or did so only occasionally may be due to a shorter stay at the University.

Chart 3 shows a significant contrast between those students who graduated and those who have not. Those respondents to the Spring 1991 survey who did not graduate indicated in greater proportions that the reason for not attempting 15 was due to dropping courses because they were too difficult, because they were not satisfied with their progress, or because the courses did not fit their expectations. These students were having more academic difficulties than other students. Indeed, seven of these students were dismissed, while all but four have left the University and not returned. Their responses could also be interpreted as excuses for their academic performance.

Chart 4 we interpret to mean that course availability is not the reason for students taking longer to graduate since students who graduated with four years indicated in similar proportions the same reasons for taking fewer than 15 credits.

The survey responses indicate a steady increase from the freshman to the senior year in the number of semesters with a lighter course load. Only 4 out of 10 freshmen and 1 out of 10 seniors have completed 15 or more credits in every semester of study. Chart 5 compares students in the Fall 1988 cohort of students with the 1991 survey respondents who graduated in four years in terms of the frequency with which they took semesters with fewer than 15 credits. While nearly 22% of the survey respondents attempted less than 15 credits in four or more semesters, about 47% of the students in the fall 1988 cohort took less than 15 credits in four or more semesters. Even so, attempting fewer than 15 credits a semester is not restricted to students who take longer to graduate.

Chart 2

Number of Hours Worked per Week

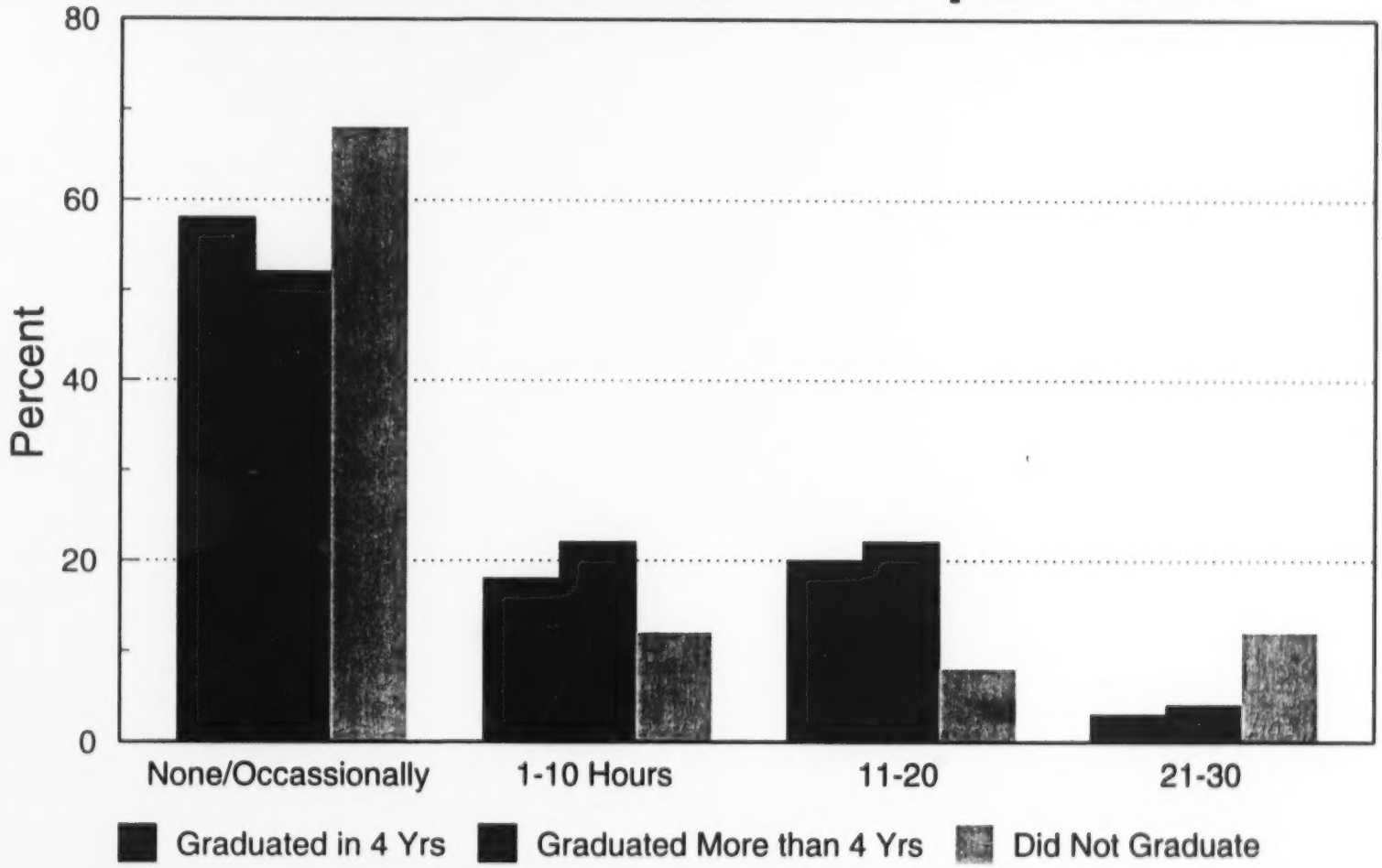

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Chart 3

Reasons For Taking Fewer Than 15 Credits

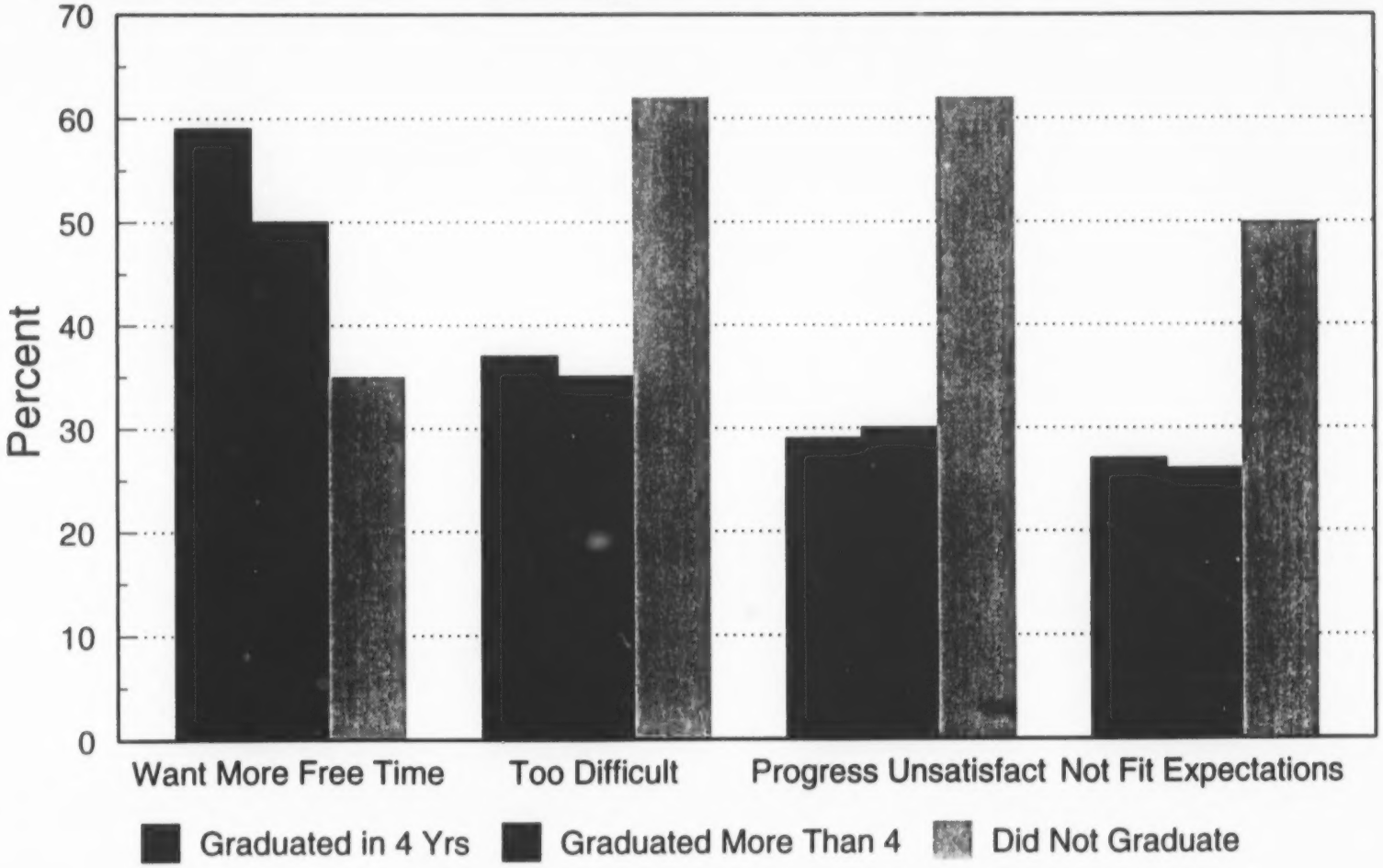

Chart 4

Reasons For Taking Fewer Than 15 Credits

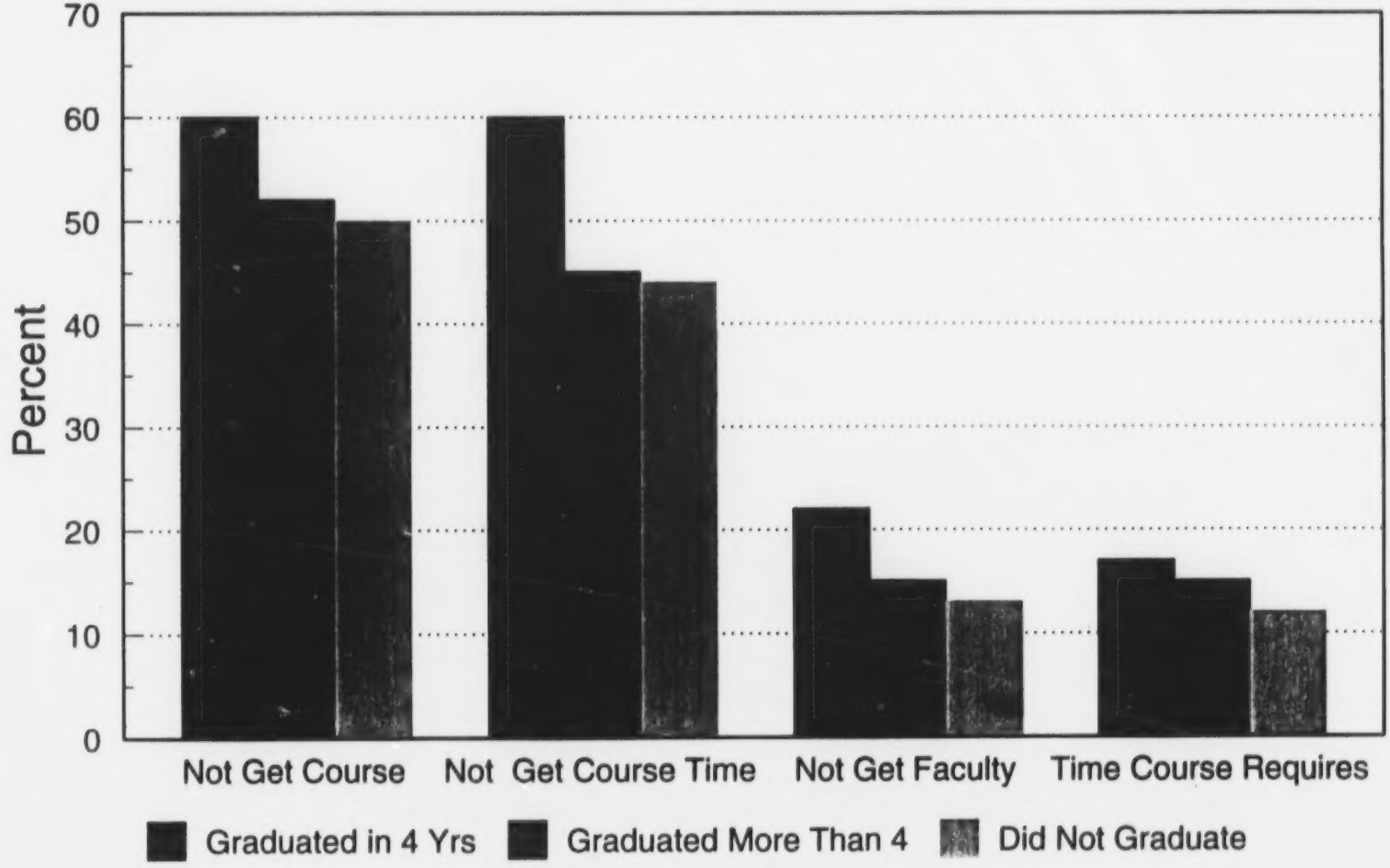

Chart 5
Distribution of Students by Number of Semesters Registered for Fewer Than 15 Credits

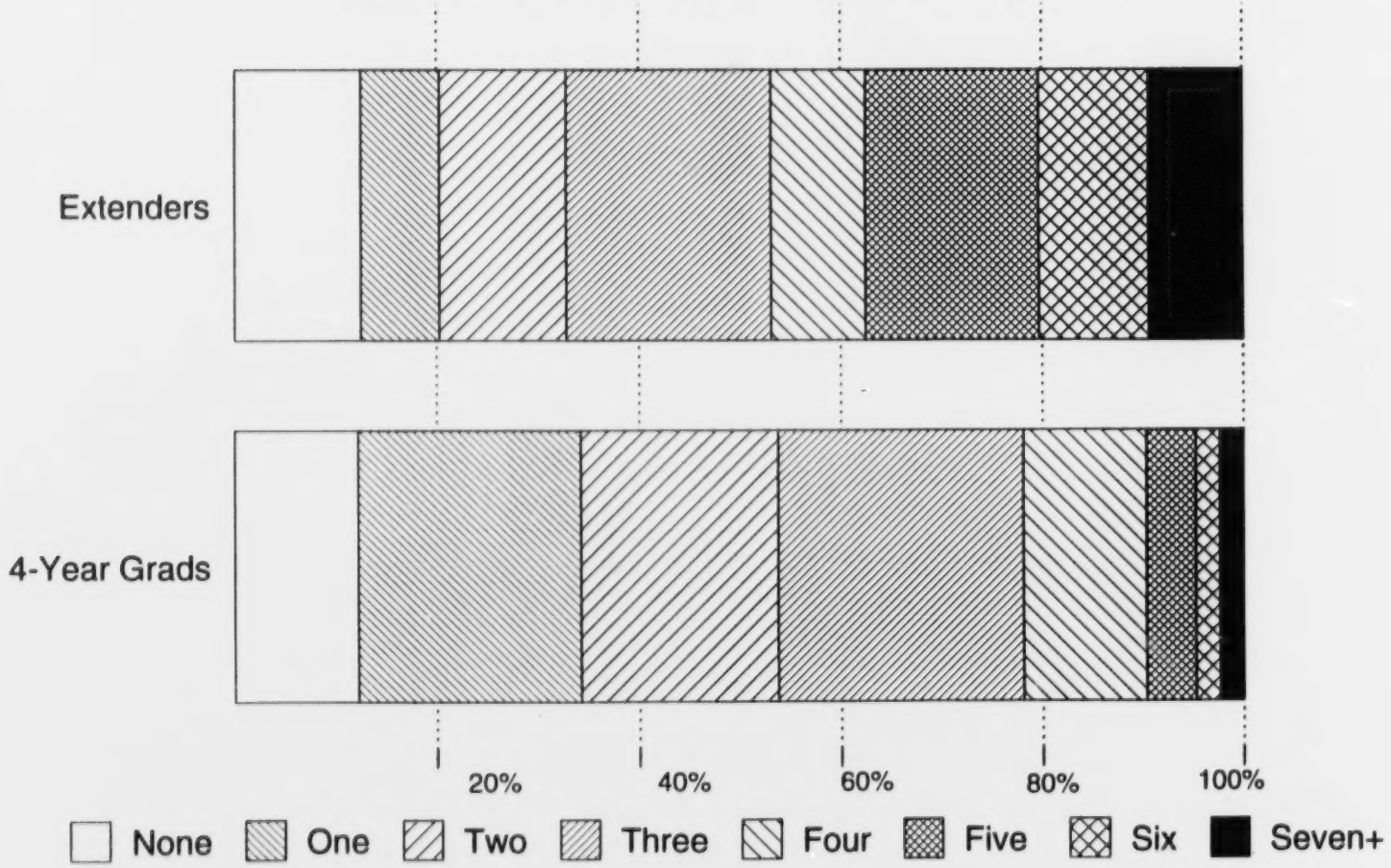

Table 5

	Fall 1988 Cohort (N=64)	Spring 1991 Respondents Who Graduated in 4 Years (N=119)	Spring 1991 Respondents Who Graduated in Longer than Four Years (N=27)	Spring 1991 Respondents Did Not Graduate (N=25)
Pre-Matriculation Credits				
Percent of Students	35.9%	53.6%	45.4%	52.4%
Average Credits	8.9	11.2	7.9	9.3
Home-Campus Summer Session				
Percent of Students	47.0%	31.7%	36.3%	4.0%
Average Credits	8.0	6.9	10.0	7.0
Summer Session Elsewhere				
Percent of Students	21.8%	24.3%	40.9%	0.0%
Average Credits	5.8	6.6	3.9	0.0
Regular Semesters Elsewhere				
Percent of Students	15.6%	4.8%	22.7%	0.0%
Average Credits	12.1	15.0	14.6	0.0

Table 5 compares course-taking strategies of the Fall 1988 freshmen extenders with respondents to two groups of 1991 Survey respondents. A higher percentage of students who graduated in four years entered the University with pre-matriculation credits and participated much less in regular and summer sessions elsewhere.

Comparing transcript data with responses from the 1991 survey one can begin to discern several different types of extenders:

a) Students who want more free time and therefore choose to attempt fewer than 15 credits a semester.

b) Students who attempt fewer than 15 credits because they could not get the course(s) they wanted, the course time(s) they wanted, the course(s) were too difficult and/or they were not satisfied with their progress. These are often students with poor grades.

c) Students who work 20 or more hours a week because they need to work to pay for college or desire extra money.

d) Students in special circumstances, e.g., those whose academic careers are interrupted by a withdrawal from the University for personal, family or medical reasons, and those who participate in dual-degree programs.

However, this analysis has also shown that students who graduate in four vs. five years have some of the same characteristics - - they also had semesters in which they attempted fewer than 15 credits, they have similar college work experiences, and they expressed similar problems with course availability. Four-year graduates and extenders also employed similar strategies in earning additional credits to supplement regular semester credits. Those students who did not graduate, on the other hand, tended to experience more academic difficulty. Unlike four-year graduates and extenders, some of whom also experienced academic difficulty, these students did not rebound and graduate.

Phase II Results

The regression results for the 1994 survey outcomes of self-reported growth and satisfaction are shown in Tables R-2 and R-3, which display only the significant beta weights from the OLS regression results. The betas are standardized coefficients that indicate the relative strength of each variable controlling for all others. Since it is possible to argue that growth influences satisfaction and vice versa, each of these two dependent variables is run with the other in and out of the analysis. The OLS regression analyses yield results that are similar to investigations of other student populations at this university, thus suggesting that there is nothing atypical about these 1994 respondents.

TABLE R-2
Regression Analysis Results for Outcome:
SELF-REPORTED GROWTH
(N = 227 Juniors and Seniors)

Student-Institution Fit Variables	Significant Betas With Other Outcomes IN	OUT	Other Variables	Significant Betas With Other Outcomes OUT	IN
Academic Integration					
Classroom Experiences	.22	.41			
Faculty Contact			**Quality of Campus Life**		
Faculty advisement			Course Availability		
Faculty Concern			Multi-cultural environment		
Student Effort			Perceptions of Prejudice		
Academic Performance			Harmony/tolerance		
			Campus responsiveness		
Social Integration			Facilities		
Peer Relations	.13	.24	**Clear rules & regs.**	.12	.12
Social Involvement			**Student Voice in decisions**		.16
Encouragement			Registration < 15 credits		
Family	.11		Graduating Later than Normal		
Friends					
Finances					
Financial need					
Grants					
Employment					
Savings/work		-.13			
Institutional & Goal Commitment					
Goal Clarity	.11	.16			
Highest Degree Expected					
Overall Satisfaction	.39	NA			
Dependent Variable					
Self-reported Growth R^2 =	.49	.43			

Turning first to Table R-2, satisfaction (.39) exerts the strongest influence on growth, followed by classroom experiences (.22) and peer relations (.13). Other significant variables include clear rules and regulations (.12), family encouragement (.11), and goal clarity (.11). When satisfaction is out of the analysis, classroom experiences (.41) and peer relations (.24) again are highly influential, followed by goal clarity (.16), student voice in decisions (.16), clear regulations (.12), and little financial support from own savings/work (-.13). These measures account for 43% of the variance with satisfaction out of the regression and 49% with it in. Not only are background variables like gender and race not significant, but neither are graduating later than normal and registering for fewer than 15 credits.

Table R-3 displays results that are generally similar to R-2. When growth is in the analysis, it constitutes the largest influence on satisfaction (.39) followed by classroom experiences (.25). When growth is out of the analysis, classroom experiences (.44) have the largest influence followed by peer relations (.21). Other statistically significant influences are exerted by faculty concern (both = .14), student voice (IN=.16), harmony/tolerance (OUT=.13), and highest degree expected to earn (IN=-.11). The explained variance shown by the R^2 increases from 42% (OUT) to 52% (IN). Again, graduating later and having multiple semesters of light credit load are not significantly associated with this outcome.

These results in Tables R-2 and R-3 are extremely consistent with the student-institution fit literature and with other investigations at this university. It appears that measures of academic integration exert the strongest influences on student growth and satisfaction. With the outcomes variables out of the analysis, classroom experiences are approximately twice as strong as any other single measure. However, extender behavior seems to be unrelated to these outcomes and experiences.

TABLE R-3
Regression Analysis Results for Outcome: OVERALL SATISFACTION
(N = 227 Juniors and Seniors)

Student-Institution Fit Variables	Significant Betas With Other Outcomes IN	OUT	Other Variables	Significant Betas With Other Outcomes OUT	IN
Academic Integration					
Classroom Experiences	.25	.44			
Faculty Contact			**Quality of Campus Life**		
Faculty advisement			Course Availability		
Faculty Concern	.14	.14	Multi-cultural environment		
Student Effort			Perceptions of Prejudice		
Academic Performance			**Harmony/tolerance**	.13	
			Campus responsiveness		
Social Integration			Facilities		
Peer Relations	.12	.21	Clear rules & regs.		
Social Involvement			**Student Voice in decisions**		.16
Encouragement					
Family			Registration < 15 credits		
Friends			Graduating Later Than Normal		
Finances					
Financial need					
Grants					
Employment					
Savings/work					
Institutional & Goal Commitment					
Goal Clarity					
Highest Degree Expected	-.11				
Self-Reported Growth	.39	NA			
Dependent Variable					
Overall Satisfaction R^2 =	.52	.42			

What then are the variables most strongly associated with longer graduation time and lighter than average credit loads? Tables R-4 and R-5 display the regression results for the outcomes related to these extender behaviors. Table R-4 shows the significant Delta-p values from the logistic regression results with extended graduation as the dependent variable. The model correctly predicts 91% of the cases. Only three variables out of 30 exert a significant influence on extended graduation, and the results are the same with the growth and satisfaction outcomes measures in or out of the analysis. Delta-p values indicate the changes in the probability of taking longer to graduate that each significant variable makes, controlling for all other variables in the analysis. As we expected from the Phase I results, receiving financial aid grants increases the probability of extending by 5.3%, and each semester of course load below 15 credits increases the likelihood of longer graduation by 3.2%. However, we did not expect that increases in grades would influence the probability of later graduation, but they do by 5% for each one-point increase in GPA. This finding is puzzling, but it is consistent with an earlier study that found many extenders take reduced loads in order to protect a high GPA (Volkwein 1993).

We are especially interested in the reasons why juniors and seniors have experienced multiple semesters with fewer than 15 credits. The dependent variable in Table R-5 is the number of semesters that each student registered for less than 15 credits. With all 30 academic and social and financial and other variables in the analysis, only 3 variables significantly affect this extender behavior. The scale reflecting student desires to protect a high GPA and have more free time (Beta = .43) is twice as influential as the scale reflecting work and family responsibilities (Beta = .21). Social involvement (Beta = -.13) is associated with fewer semester of light load. With an R^2 of .27, this model leaves almost three-fourths of the variance unexplained by any of the 30 measures in the study.

TABLE R-4
Logistic Regression Analysis Results for Outcome:
TAKING LONGER THAN NORMAL TO GRADUATE
(N = 190 Juniors and Seniors)

Student-Institution Fit Variables	Significant DELTA Ps With Other Outcomes IN	OUT	Other Variables	Significant DELTA Ps With Other Outcomes OUT	IN
Academic Integration					
Classroom Experiences					
Faculty Contact			Quality of Campus Life		
Faculty advisement			Course Availability		
Faculty Concern			Multi-cultural environment		
Student Effort			Perceptions of Prejudice		
Acad. Perf. (Cum GPA)	.050	.050	Harmony/tolerance		
			Campus responsiveness		
Social Integration			Facilities		
Peer Relations			Clear rules & regs.		
Social Involvement			Student Voice in decisions		
Encouragement					
Family			**Registration < 15 credits**	.032	.032
Friends					
Finances					
Financial need					
Grants	.053	.053			
Employment					
Savings/work					
Institutional & Goal Commitment					
Goal Clarity					
Highest Degree Expected					
Overall Satisfaction		NA			
Self-Reported Growth		NA			

Dependent Variable: **Graduating Later Than Normal**
Intercept = -5.372
Percent of Cases Correctly Predicted = 90.5%

TABLE R-5
Regression Analysis Results for Outcome:
NUMBER SEMESTERS TAKING FEWER THAN 15 CREDITS
(N = 227 Juniors and Seniors)

Student-Institution Fit Variables	Significant Betas With Other Outcomes IN	OUT	Other Variables	Significant Betas With Other Outcomes OUT	IN
Academic Integration					
Classroom Experiences					
Faculty Contact			Quality of Campus Life		
Faculty advisement			Course Availability		
Faculty Concern			Multi-cultural environment		
Student Effort			Perceptions of Prejudice		
Academic Performance			Harmony/tolerance		
			Campus responsiveness		
Social Integration			Facilities		
Peer Relations			Clear rules & regs.		
Social Involvement	-.13	-.13	Student Voice in decisions		
Encouragement					
Family			**Reasons for < 15 credit Reg.**		
Friends			**Protect GPA & free time**	.43	.43
			Work / Family Responsib.	.21	.21
Finances			Course Access a Problem		
Financial need			Dropped course/in diffic'lty		
Grants					
Employment					
Savings/work					
Institutional & Goal Commitment					
Goal Clarity					
Highest Degree Expected					
Overall Satisfaction					
Self-Reported Growth					
Dependent Variable:			**# Semester < 15 credits R^2 =**	.27	.27

Conclusion and Discussion

The existing enrollment management and student-institution fit literature generally concentrates on two student populations -- persisters and dropouts. This study investigates a third population that we call extenders -- those ostensibly full-time students who take longer than four years to complete the B.A.

The first, descriptive phase of this research shows that students who take longer to graduate have some of the same characteristics as those students who graduate in four years - - both have semesters in which they attempt fewer than 15 credits, they have similar college work experiences, and they express similar problems with course availability. Four-year graduates and extenders also employ similar strategies in earning additional credits to supplement regular semester credits. Those students who do not graduate, on the other hand, tend to experience more academic difficulty. Unlike four-year graduates and extenders, some of whom also experienced academic difficulty, dropouts do not rebound and graduate. Students who took longer to graduate are generally satisfied with this outcome.

The second, analytic phase of this study finds that taking longer to graduate is significantly associated with only three out of 30 measures in our analysis: financial need (grants), protecting a high GPA, and registering for fewer than 15 credits in multiple semesters. Our other measures of academic integration, social integration, campus climate, encouragement by family and friends, institutional and goal commitment, are not significantly related to extender behavior. Thus, students who take longer to graduate or who tend to register for fewer than 15 credits are not significantly different from students who graduate in four years on most variables developed in other studies to measure academic, social, and administrative aspects of the campus. Even the measures of self-reported growth and overall satisfaction appear to be unrelated to delayed graduation.

Extenders appear to have neither more nor less academic and social integration and institutional commitment than non-extenders. These students are not negatively impacted by taking longer to graduate and are generally satisfied with their experiences.

A regression analysis of those who register for fewer than 15 credits produces a similar result in that only three variables are significant: protecting a high GPA, work responsibilities, and lack of social involvement. The financial need to work and the lack of social integration are consistent with Cabrera's integrated model of student retention (1993), but there are few other congruencies between these findings and the student-institution fit literature. Even the measures of campus climate and course availability proved non-significant in explaining lighter registration loads.

Our study of this population produces models that are quite robust in predicting student growth and satisfaction. Indeed, the regression results for the 1994 survey respondents are extremely consistent with the student-institution fit literature and with other research conducted at the University. Our measures of academic and social integration, institutional and goal commitment, and campus climate predict between 42% and 52% of the variance in self-reported growth and satisfaction. Thus, it is all the more surprising that these factors explain so little extender behavior.

The regression analysis pinpoints the importance of the number of semesters registered for fewer than 15 credits, financial need (grants), and high GPA in explaining why students take longer to graduate. More importantly, two factors are significant in predicting the number of semesters with fewer than 15 credits: protecting their GPA and desiring more free time loaded together in one factor, and needing to work for various reasons (including lifestyle and family) loaded together to form another significant factor. Course availability and dropping a course because of difficulty were not significant factors.

That course availability is not a significant factor is an important finding for campus management. While these results are somewhat reassuring, there remain several concerns. While extenders appear not to be harmed or dissatisfied with having to take longer to graduate, the numbers of students taking less than 15 credits has important institutional implications that need to be addressed. State-supported institutions at which full-time-equivalent (FTE) enrollments are an important (if not sole) determinant of funding must recognize the impact that lighter credit loads has. While these students are paying full-time tuition and require 'full-time' support services, they generate less than 1.00 FTE per student and, therefore, less than full state support per student. Even if students want to register for 15 credits, a quick review of current academic policies and procedures at our own and other campuses suggests an implicit message that 12 is good: full-time tuition is based on 12 credits, full-time status is defined as 12 credits, it takes only 24 credits (not 30) to advance from Freshmen to Sophomore status.

Financial need is an important factor in taking longer to graduate in this study. We expected that financial aid would help a student graduate in four years, but qualifying for grants also is associated with students from poor and disadvantaged backgrounds that have a more difficult adjustment to college life. With changing financial aid policies and decreasing resources from federal and state government, can we expect that more students will take longer to graduate because financial aid will be insufficient and they will be required to spend more time working ? What impact do extenders have upon the financial aid resources of an institution ? More semesters enrolled means financial aid not available for other (new) students; especially since financial aid entitlements under many programs increase with class year.

Two factors that ideally should be included in such studies are not present in this research. The first, entering student quality, as measured by average SAT score and high school grade-point average, is not included since previous research at the University found a low relationship between pre-college scores and grades and college outcomes. (This can explained in part by the lack of sufficient variance in this selective population

and the tendency of the brightest students to enter the most difficult majors.) The second factor, changing one's major or intended major, was considered in an earlier, preliminary study of this topic, but students do not officially declare a major until the end of their Sophomore or beginning of their Junior year. Prior to that time the major intentions of students are generally not captured by the University's student record-keeping system. Another limitation of any single institution study is knowing whether the results are generalizable to others.

As with most studies, we find in concluding this one that there are at least two recommended additional lines of inquiry. First, because of the small number of extenders at this institution, it would be helpful to have a multi-institution study of this phenomenon. In addition, this study looked only at traditionally-admissible students who are expected to graduate in four years . What are the course-taking patterns of students who are admitted under special admissions programs? What effect will changes in financial aid policies and resources have upon these populations and their course-taking behavior and time to graduation ?

While these findings have enormous implications for enrollment management, they also have implications for scholarship and theory development. Tinto (1987), Cabrera (1993), and Mallette and Cabrera (1991) are among those calling for an application of their models to various student subpopulations. We need to understand different facets of student behavior, and dropouts, stopouts, and extenders are not all alike. Extenders are an important student population for additional research precisely because we found little influence exerted by the usual measures contained in other studies that have used concepts in the Tinto and Cabrera models, such as academic and social integration, institutional and goal commitment, and encouragement by family and friends. Apparently these concepts have little to do with student decisions to take a lighter academic load and to lengthen their graduation date.

The existence of a large group of **financial need extenders** lends support to those theories and campus practices that highlight the importance of student financial aid as a factor in a variety of college experiences (Stampen and Cabrera 1986; Cabrera et al. 1992). On the other hand, the existence of a large group of **grade-conscious extenders** may present difficult policy problems for campus administrators, as well as theoretical challenges for scholars.

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